

Superfund Policy Statements and Guidance on Disposition of Radioactive Waste in non-NRC licensed Disposal Facilities

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U.S. Environmental Protection Agency
Office of Superfund Remediation
and Technology Innovation (OSRTI)
Science and Policy Branch

Presented to the
WM 2013 Symposia
in Phoenix, AZ on February 27, 2013

Purpose

- ◆ Provide overview of current EPA guidance, policy statements, and resources on radioactive waste management at Superfund sites
- ◆ Describe evaluations under existing guidance and policy statements



JUL 26 2000

OFFICE OF
SPECIAL INVESTIGATIONS AND COMPLAINTS

OSWER No. 9200.1-33P

MEMORANDUM

SUBJECT: Headquarters Consultation for Radioactively Contaminated Sites

FROM: Timothy Fields, Jr. *Timothy Fields, Jr.*
Assistant Administrator

TO: Addressee

PURPOSE

The purpose of this memorandum is to request that EPA Regional Offices consult with Headquarters on Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response decisions involving (1) onsite management (e.g., capping of material in place, building disposal cells of radioactive materials), or (2) when there is a potential natural resource setting issue related to a radioactive substance, pollutant or contaminant. This consultation policy for CERCLA site decisions that are addressing radioactive constituents is applicable to all CERCLA sites, regardless of party (FEDERAL, STATE, or LOCAL), and remedial or non-time critical (NTC) removal action is planned. This consultation review is also available (although not included in this request by Headquarters) for decisionsmakers at other Federal agency-level and State-level CERCLA radioactively contaminated sites, or radioactively contaminated sites where Resource Conservation and Recovery Act (RCRA) Corrective Action

BACKGROUND

EPA has initiated a number of management review procedures to ensure national remedy selection policies and procedures are being implemented in a reasonable and appropriate manner at CERCLA sites. EPA issued a summary of various consultation procedures currently in place in the "Consolidated Guide to Consultation Procedures for Superfund Response Decision" (OSWER 9200.1-10FS, May 1997). In addition, the current process for Headquarters review and consultation for CERCLA response decisions involves a review of proposed plans at Field-level and PRP-level sites in accordance with the May 1996 OERB directive "Focus Areas for Headquarters OERB Support for Regional Decision



JUN 26 2000

The Honorable Clint Stenerson
Minority Leader
Idaho State Senate
State Capitol
P.O. Box 83720
Boise, Idaho 83720-0081

Dear Senator Sturgeon:

This letter responds to questions to the Environmental Protection Agency (EPA) contained in your letter of February 28, 2000, to Chairman Richard Meese of the Nuclear Regulatory Commission, concerning disposal of radioactive by-product material by the U.S. Army Corps of Engineers (USACE) under the Formerly Utilized Sites Remedial Action Program (FUSRAP). In particular, you expressed concern about the unregulated disposal of Atomic Energy Act (AEA) radioactive byproduct material (Section 116(2)) that was generated before 1978.

FUSRAP was established by Congress in 1974 to identify, evaluate, and remediate the environmental conditions of private and Federal sites used in the early years of the atomic energy program by the Manhattan Engineering District and the Atomic Energy Commission (Department of Energy predecessor agencies). On October 13, 1997, the Energy and Water Resources Appropriations Act of 1998, Public Law 105-42, designated the USACE as the Federal agency with responsibility for the implementation of FUSRAP. USACE performs response actions for FUSRAP sites under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act as amended (CERCLA).¹ As such, the USACE is subject to the National Oil and Hazardous Substance Pollution Contingency Plan (NCP), which provides the blueprint for response actions under CERCLA.

There are a variety of wastes that the USACE may encounter while remediating the FUSRAP sites. Categories of wastes include solid and hazardous waste regulated under the Resource Conservation and Recovery Act (RCRA), as well as radioactive waste that may or may not be currently regulated by the Nuclear Regulatory Commission (NRC) under the Atomic Energy Act (AEA). Hazardous waste may be either separate from the radioactive materials, or contaminated with them as mixed waste. With regards to the radiological waste, some of this

³ The Corps was directed to address FUSRAP sites under CERCLA authority in its 1999 appropriations language. In addition, James M. O'Donnell, DOE, Acting Assistant Secretary for Environmental Management, and Russell L. Fubiner, Major General, U.S. Army Director of Civil Works, signed the Memorandum of Understanding between the U.S. Department of Energy and the U.S. Army Corps of Engineers: *Baseline Process Information and Assessment of the Savannah, Georgia, FUSRAP Site*, Kirtland Air Force Base (FUSRAP) (March 1999). This also may be the ultimate report needed under CERCLA authority.

1. Existing Guidance, Policy Statements, and website

STATEMENT OF
MICHAEL SHAPIRO
PRINCIPAL DEPUTY ASSISTANT ADMINISTRATOR
OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
U.S. SENATE

July 25, 2000

INTRODUCTION

Good morning, Mr. Chairman and Members of the Committee. I am pleased to have this opportunity to appear before you today to discuss the low activity radioactive wastes from Formerly Utilized Sites Remedial Action Program (FUSRAP) sites. My testimony will address the authorities that EPA has over the off-site disposal of wastes from FUSRAP sites and particularly the material referred to as 11c(2) byproduct material. I will be dealing with EPA's authorities under the Uranium Mill Tailings Radiation Control Act (UMTRCA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), the regulations and policies that we provide that pertain to the off-site disposal of FUSRAP waste, and the Resource Conservation and Recovery Act (RCRA).

The Formerly Utilized Sites Remedial Action Program (FUSRAP) was established in 1974 to identify, evaluate, and remediate sites that were contaminated as a result of the nation's early atomic energy program under the auspices of the Manhattan Engineer District and the Atomic Energy Commission. In the FY 1998 Energy and Water Appropriations Act, Congress transferred management of the FUSRAP program from the U.S. Department of Energy to the U.S. Army Corps of Engineers.

11c(2) BY-PRODUCT MATERIAL AND THE URANIUM MILL TAILINGS RADIATION CONTROL ACT

According to the US Army Corps of Engineers, most of the material at FUSRAP sites is residual radioactive material from the processing of ores for source material content. This material was first defined in the Uranium Mill Tailings and Radiation Control Act of 1978. UMTRCA's purposes were:

(1) to provide a program of assessment and remedial action at inactive uranium mill tailings sites, and



SEP 18 2005

OFFICE OF
SOLID-WASTE AND EMERGENCY

The Honorable Robert C. Smith
Chairman
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

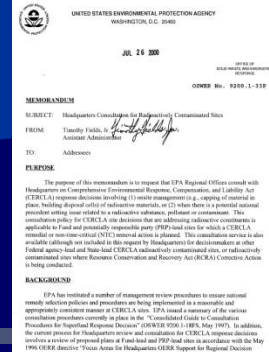
Thank you for your letter dated August 8, 2000. The letter was a follow-up to my appearance before your Senate Environment and Public Works Committee hearing on July 23, 2000. The purpose of the hearing was to discuss the management and disposal of low activity radioactive waste. Your letter asked me to provide answers to questions that had been submitted for the hearing record.

Enclosed are responses to your questions regarding the management and disposal of low activity radioactive waste. I hope this information is helpful to you. If you would like more information, please contact Michele McKeever in our Office of Congressional and Intergovernmental Relations at (202) 564-3488. I appreciate your interest in this matter.

Sincerely,
Michael Shapiro
Michael Shapiro
Principal Deputy Assistant Administrator

Enclosure

Guidance: HQ Consultation



- ◆ *Headquarters Consultation for Radioactively Contaminated Sites (7/26/2000) OSWER Directive 9200.1-33P*
- ◆ Regions consult with HQ on CERCLA remedial or NTCRA decisions involving:
 - » Onsite waste management (e.g., capping of material in place, building disposal cells) of radioactive contamination
 - » When there is a potential national precedent setting issue related to a radiation

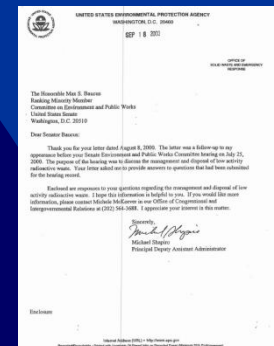
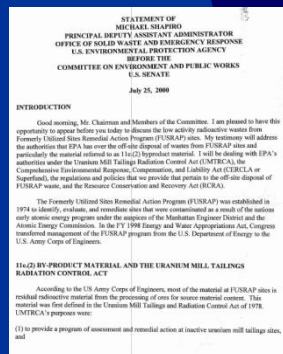
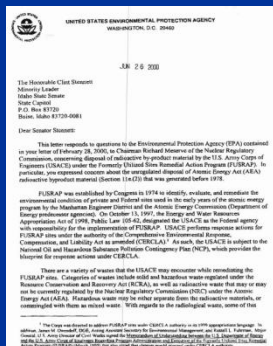
Implications

- ◆ On-site waste management of radioactive waste has generally happened at areas with significant distance from populated areas:
 - » Federal facility sites
 - » Mining sites



Other Policy Statements

- ◆ There are 3 other documents with policy statements focused on waste management issues for CERCLA sites:
 1. Letter from OSWER (Tim Fields) and OAR (Bob Percarsepe) AA's to Idaho State Senator Clint Stennett (6/26/2000)
 2. Testimony of OSWER Deputy AA (Mike Shapiro) to Senate Environment and Public Works Committee (7/25/2000)
 3. Follow-up letters to congressional testimony from OSWER Deputy AA (Mike Shapiro) to Senators Robert Smith and Max Baucus (9/18/2000)



Policy Statements within Stennett and EPW letters and testimony

- ◆ When disposing of radioactive waste from a CERCLA site at a non NRC-licensed disposal facility, Regions should ensure that the following criteria are met:
 - » **Design.** Facility should be designed and operated to accept the waste while protecting human health (e.g., 10-4 to 10-6) and the environment



Policy Statements within Stennett and EPW letters and testimony, cont

- » **Safeguards.** Safeguards to ensure protect human health and the environment include:
 - Permit or ROD conditions that address radiological risk
 - GW monitoring to ensure radiological releases do not compromise the GW as a resource (e.g., exceed MCLs)
 - Waste management practices to limit public exposure to acceptable 10^{-4} to 10^{-6} risk range
 - Corrective action requirements to ensure remediation if the disposal unit fails
 - Practices to ensure worker protection (e.g., health and safety plans, waste analysis, and waste acceptance criteria (WAC))

Policy Statements within Stennett and EPW letters and testimony, cont

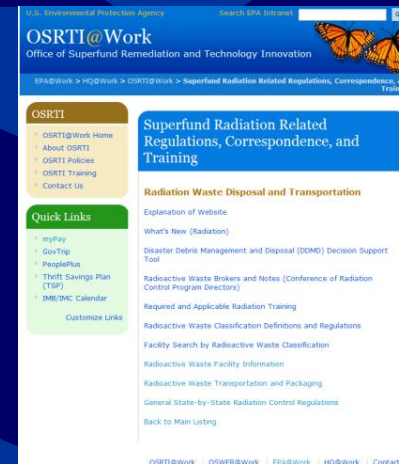
- » Community Involvement. Ensure that the community is:
 - aware of the potential for local radioactive waste disposal, and
 - has adequately informed, and
 - been provided the opportunity to comment



Radiation Waste Management and Transportation Intranet website

◆ Intended to help EPA staff who are involved in the packaging, transport, and disposal of radioactive material. Information includes:

- » Radioactive waste brokers
- » Waste classification
- » Facility information
- » Transportation and packaging



http://intranet.epa.gov/osrti/ard/spb/radiation/byproduct_material/rwdt.html

◆ Sub website to the Superfund Radiation Intranet website includes: regulations, letters, & training

<http://intranet.epa.gov/osrti/ard/spb/radiation/related.html>



MCCLELLAN AFB
CALIFORNIA

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 7536



DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1715
BALTIMORE, MARYLAND 21203-1715

26 March 2012

REPLY TO
ATTENTION OF
CENAB-ENV-HI

United States Environmental Protection Agency, Region III
Attention: Hazardous Site Cleanup Division (Mitch Cron)
1650 Arch Street
Philadelphia, PA 19103-2029

Dear Mr. Cron

The purpose of this letter is to summarize the United States Army Corps of Engineers, Baltimore District - Hazardous, Toxic, and Radioactive Waste Design Center's assessment of alternative disposal options for bulk building debris and materials originating from the OUI remedial action demolition of 13 buildings at the Safety Light Corporation (SLC) Site located at 4150-A Old Berwick Road, Bloomsburg, PA.

SLC Site History

The SLC Site was listed on the National Priorities List (NPL) on April 27, 2005. Presently the SLC Site is the subject of a remedial action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to remove low activity, high volume contaminated building debris from the SLC Site.

SLC failed to renew its license from the US Nuclear Regulatory Commission (USNRC) and complete its responsibilities to decommission and dispose of waste and contaminated equipment at the SLC Site. The SLC has ceased operations at the SLC Site and the Environmental Protection Agency (USEPA) is seeking to achieve removal of the buildings as described in the Record of Decision for OUI at the SLC Site in accordance with the National Oil and Hazardous Substance Pollution Contingency Plan (NCP) to address threats to human health and the environment posed by the SLC Site. The US Army Corps of Engineers (USACE) is supporting the USEPA in the management and cleanup of the SLC Site under an interagency agreement. The USEPA and the USACE are conducting these operations under their respective CERCLA, NCP and interagency agreement authority. The SLC Site is being addressed in three separate operable units (OUs): buildings and debris OU1, ground water OU2, and soils, sediments and surface waters OU3.

Implementation of the OU1 selected remedy in the Record of Decision (ROD) involves demolition of 13 structures. The 13 structures are identified as follows:

- Multi-Metals building
- Carpenter Shop

2. Site-specific Stennett Analyses



Previous use of Stennett letter 2000 Shattuck Analysis

- ◆ U.S. Ecology permit determined to be protective for waste from Shattuck (Denver Radium) site using the following criteria:
 - ◆ Design
 - ◆ Safeguards
 - » **Permit**
 - » **GW**
 - » **Corrective Action Requirements**
 - » **Work Standards and Monitoring**
 - » **WAC –**
 - ◆ Community Involvement



HQ Worked on Development of Stennett Evaluations for 2 Sites

- ◆ McClellan Air Force Base, CA (Region 9)
 - » On-site disposal in a consolidated engineered cell
 - » Stennett analysis completed
http://afrpaar.lackland.af.mil/AR/getdoc/MCCLN/MCCLN_AR_7536.pdf
- ◆ Safety Light, PA (Region 3)
 - » Change waste code to allow licensed material to be disposed of in a non-NRC licensed disposal unit
 - » Stennett analysis under R3 management and State (PA and ID) review

Site-Specific Stennett Analysis Design

◆ McClellan

- » Disposal unit will be designed to be protective for radioactive contamination

◆ Safety-Light

- » Waste to be sent to U.S. Ecology in Idaho, which is designed for radioactive waste disposal
- » Approved in 2000 by HQ and Region 8 for disposal of Shattuck Superfund site radioactive waste disposal

Site-Specific Stennett Analysis Safeguards

◆ McClellan

- » **Permit** – ROD identified ARARs (Subtitle C cap), overall design, and need for mitigation measures if unit leaks.
- » **GW** – ROD requires groundwater monitoring for radionuclides and Subtitle C compliant liner and design document will outline groundwater sampling
- » **Corrective Action Requirements** – Specified in ROD, design document and 5 Year Reviews
- » **Work Standards and Monitoring** – ROD and O&M plan will outline OSHA-type worker standards
- » **WAC** – WAC criteria based on expected site levels and modeling run (PRG for risk) to show protectiveness. ROD set WAC of Ra-226 at 600 pCi/g and Cs-137 at 6 pCi/g

Site-Specific Stennett Analysis

Safeguards, cont

◆ Safety Light

- » **Permit** – Idaho facility has Subtitle C permit with radionuclide-specific elements.
- » **GW** – Permit requires groundwater monitoring for radioactive contaminants
- » **Corrective Action Requirements** – Specified in permit and ROD
- » **Work Standards and Monitoring** – Specified in permit and ROD
- » **WAC** –Cs-137 at 25 pCi/g primary COC

Site-Specific Stennett Analysis

Community Acceptance

◆ McClellan

- » Received public comments during the Proposed Plan
- » The California agencies for Superfund and RCRA have been working with Region 9 and the Air Force and are supportive

◆ Safety Light

- » Idaho permitting agency (RCRA) for the receiving disposal facility had opportunity to review acceptability of radioactive waste disposal at time of permit modifications
- » The Pennsylvania agency overseeing the NPL site have been supportive of this action

For More Information

For further information or questions:

» Stuart Walker

—Phone: (703) 603-8748

—Fax: (703) 603-9133

—Email: Walker.Stuart@epa.gov

Questions?

